Virginia City Hybrid Energy Center
Response to Data Request
Bruce Buckheit, Member, Virginia Air Pollution Control Board

Question (Page No. 13):

Please also contact EPA to obtain similar CEM data for the Craig Station facility.

Response:

Tri-State Generation & Transmission Association, Inc's Craig Station facility, located in Moffat County, Colorado, was issued a PSD permit in March 1980 for Unit 3. It is equipped with a spray dryer and associated equipment for flue gas sulfur dioxide (SO_2) control. Construction Permit No. 12MF322-1 issued by the Colorado Department of Public Health and Environment set the SO_2 limit for Unit 3 of this facility at 0.2 lb/MMBTU heat input, as averaged over any calendar day.

The Craig Station receives its coal supply primarily from Trapper Mine (one mile south of the plant) and supplemental coal by rail from Colowyo Mine. The chart below presents the sulfur content rang of the coal fuel used at the Craig Station for the past six years. The Trapper Mine has a higher sulfur content.

Year	Sulfur in Coal (%wt)*	
	Minimum	Maximum
2003	0.28	0.58
2004	0.27	0.52
2005	0.31	0.54
2006	0.25	0.53
2007	0.28	0.65

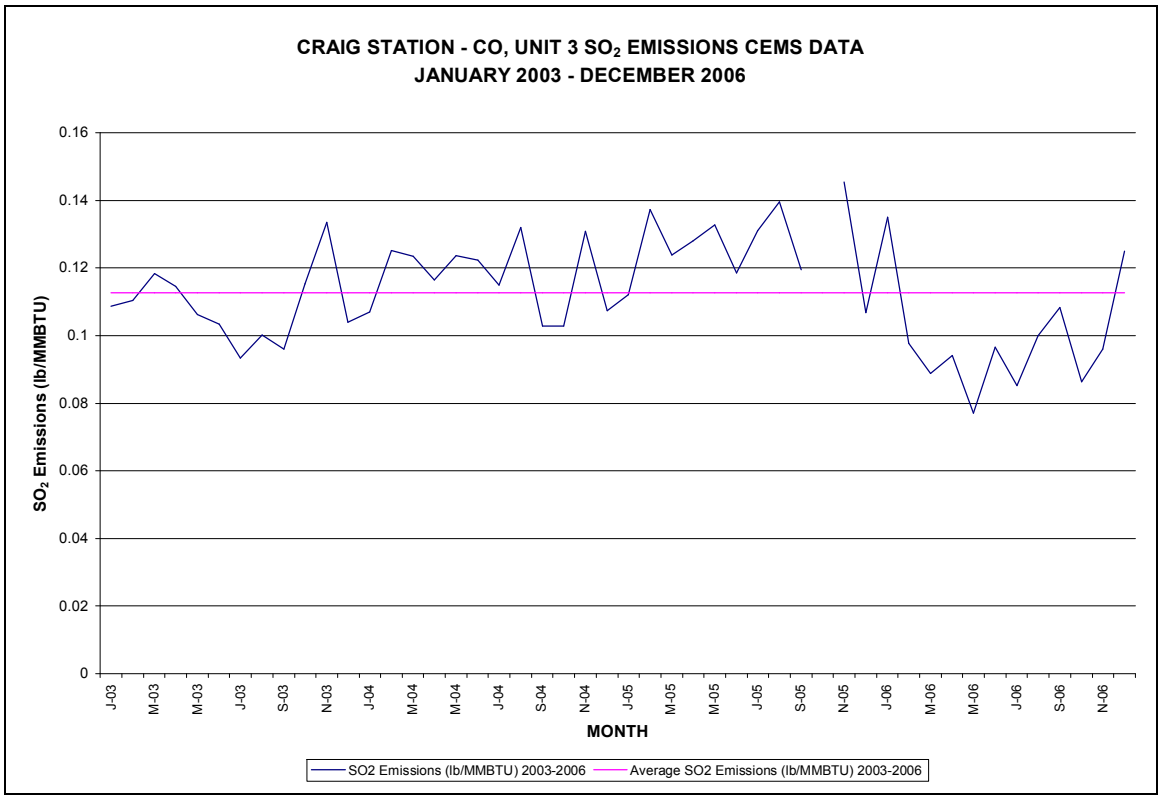
*Federal Energy Regulatory Commission (FERC) Form 423 - Monthly Report of Cost and Quality of Fuels for Electric Plants.

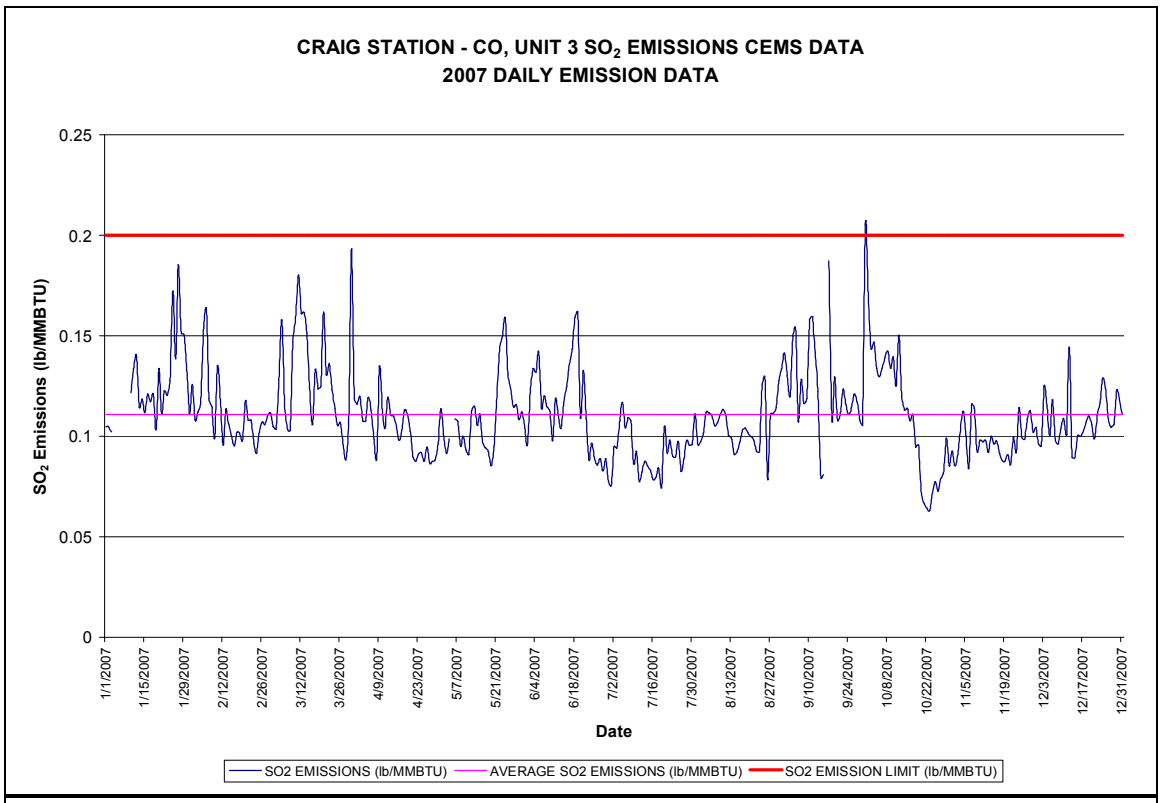
SO_2 CEMS data for Craig Station Unit 3 is presented below. The data was obtained from EPA's Clean Air Markets database. The certification of the 2007 data by EPA is still pending..

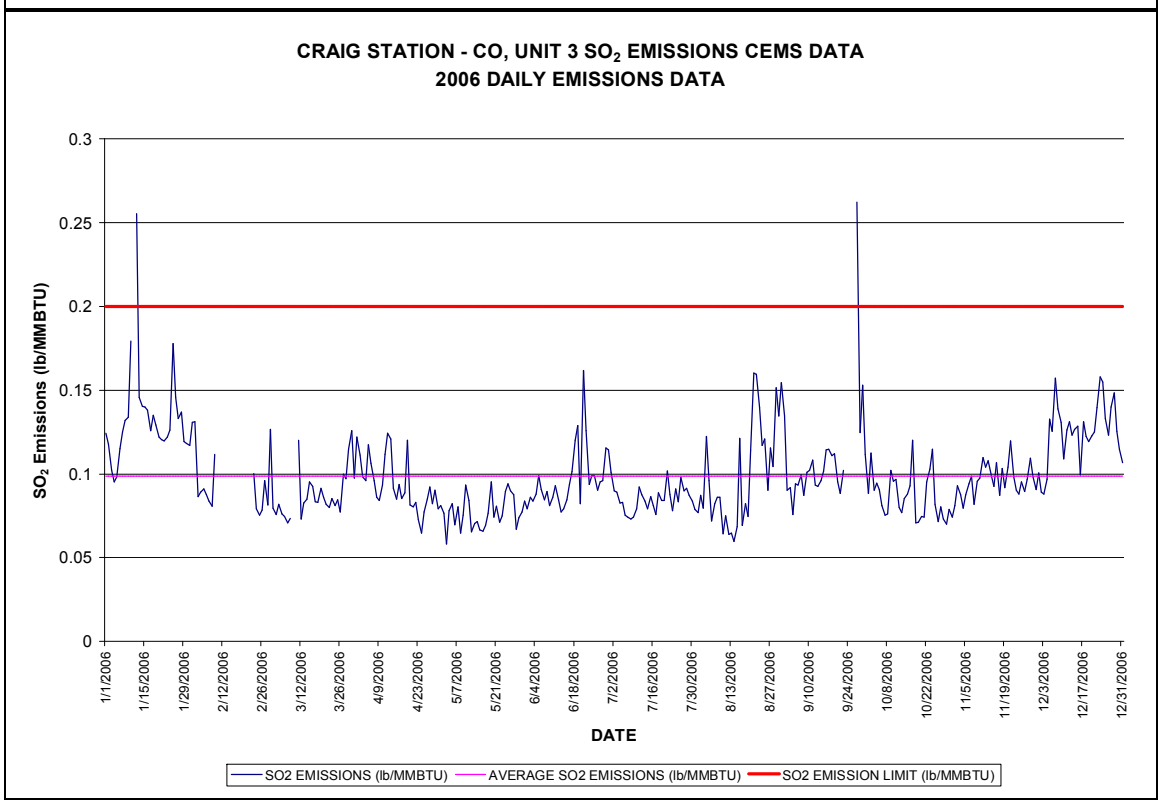
The 2003 -2006 annual data shows a consistent SO_2 control around 0.11 lb/MMBTU with a standard deviation of 0.016. The daily CEMS data also shows consistent SO_2 control, albeit with a larger variance, as would be expected of the shorter averaging period.

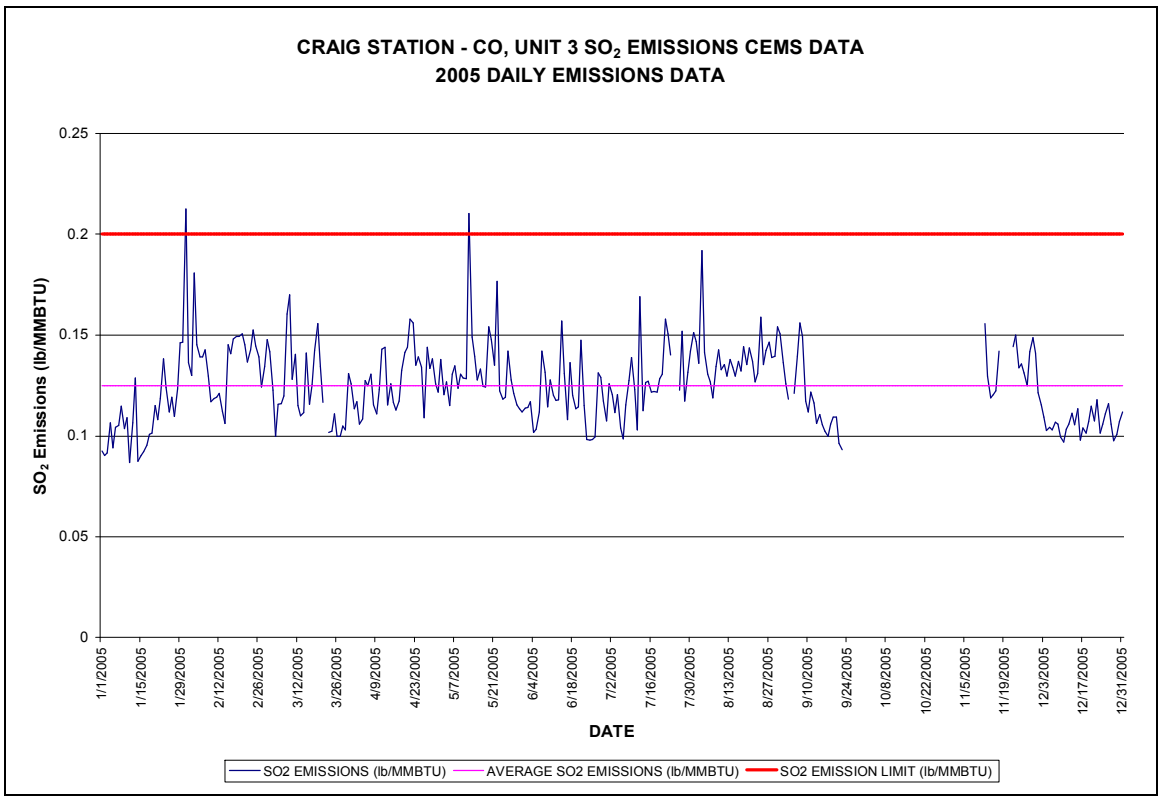
As the graph demonstrates, the current Craig Station SO_2 control has been consistent and reliable. Since the Craig Station facility was permitted significant process improvements have been made to dry systems - spray dryer absorbers (SDA) and circulating dry scrubber (CDS) technologies. The VCHEC SO_2 control train will, therefore, provide more consistent and reliable performance as a result of these technology developments. It should also be noted that the VCHEC SO_2 permit limit of 0.12 lb/MMBTU is much lower than the Craig Station's SO_2 limit of 0.20 lb/MMBTU even though the maximum fuel

sulfur content of the VCHEC is much higher than the maximum sulfur in the coal burned by the Craig Station.




CRAIG STATION - CO, UNIT 3 SO2 EMISSIONS CEMS DATA
2007 DAILY EMISSION DATA
SO2 Emissions (lb/MMBTU)
0.25
0.2
0.15
0.1
0.05
0
1/1/2007
1/15/2007
1/29/2007
2/12/2007
2/26/2007
3/12/2007
3/26/2007
4/9/2007
4/23/2007
5/7/2007
5/21/2007
6/4/2007
6/18/2007
7/2/2007
7/16/2007
7/30/2007
8/13/2007
8/27/2007
9/10/2007
9/24/2007
10/8/2007
10/22/2007
11/5/2007
11/19/2007
12/3/2007
12/17/2007
12/31/2007
Date
SO2 EMISSIONS (lb/MMBTU)
AVERAGE SO2 EMISSIONS (lb/MMBTU)
SO2 EMISSION LIMIT (lb/MMBTU)


CRAIG STATION - CO, UNIT 3 SO2 EMISSIONS CEMS DATA
2006 DAILY EMISSIONS DATA
SO2 Emissions (lb/MMBTU)
0.3
0.25
0.2
0.15
0.1
0.05
0
1/1/2006
1/15/2006
1/29/2006
2/12/2006
2/26/2006
3/12/2006
3/26/2006
4/9/2006
4/23/2006
5/7/2006
5/21/2006
6/4/2006
6/18/2006
7/2/2006
7/16/2006
7/30/2006
8/13/2006
8/27/2006
9/10/2006
9/24/2006
10/8/2006
10/22/2006
11/5/2006
11/19/2006
12/3/2006
12/17/2006
12/31/2006
DATE
SO2 EMISSIONS (lb/MMBTU)
AVERAGE SO2 EMISSIONS (lb/MMBTU)
SO2 EMISSION LIMIT (lb/MMBTU)


CRAIG STATION - CO, UNIT 3 SO_2 EMISSIONS CEMS DATA
2005 DAILY EMISSIONS DATA
SO_2 Emissions (lb/MMBTU)
0.25
0.2
0.15
0.1
0.05
0
1/1/2005
1/15/2005
1/29/2005
2/12/2005
2/26/2005
3/12/2005
3/26/2005
4/9/2005
4/23/2005
5/7/2005
5/21/2005
6/4/2005
6/18/2005
7/2/2005
7/16/2005
7/30/2005
8/13/2005
8/27/2005
9/10/2005
9/24/2005
10/8/2005
10/22/2005
11/5/2005
11/19/2005
12/3/2005
12/17/2005
12/31/2005
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SO2 EMISSIONS (lb/MMBTU)
AVERAGE SO2 EMISSIONS (lb/MMBTU)
SO2 EMISSION LIMIT (lb/MMBTU)